ABSTRACT

[0020] A design for constructing an input circuit to receive and process an electrical signal, such as a voltage signal from a voltage source, where the input circuit has an extremely high resistance of at least 10^{11} ohms and is located on a printed circuit board. A first area of the printed circuit board carrying components of the input circuit is separated from a second area surrounding or contiguous to it by a channel-shaped recess to preserve the high resistance of the circuit even under operating conditions and at high relative humidity. The circuit is configured in such a way that the channel-shaped recess terminates in the interior of the printed circuit board and is extended in the direction of the thickness of the printed circuit board immediately up to a moisture-impermeable barrier layer which underlies the first area of the printed circuit board. The channel-shaped recess and the first area are filled and surrounded by a cohesive moisture-impermeable material.